

CLAIMS

I Claim,

1. An improved structure of a light wave-guide device
5 essentially comprised of a backlight module including
a reflector mask, multiple light sources, multiple
optical films and a protector sheet arranged in sequence
from inside out; wherein, each light source being made
of stripe or U-shape or any other continuously curved
10 light tube, and disposed at a proper spacing at where
between the reflector mask and a lower diffuser sheet
is characterized by that:
the backlight module being provided with at least one
optical wave-guide device; multiple recesses being
15 provided to the optical wave-guide device to
accommodate respective light source; light from each
light source passing through the optical wave-guide
device being properly refracted and reflected to evenly
diffuse through the lower diffuser sheet to eliminate
20 the dark band formed between abutted light sources;
spacing between light source and the diffuser plate
being reduced; and the thickness of the backlight module
being also reduced in meeting compact requirements.
2. An improved structure of a light wave-guide device as
25 claimed in Claim 1, wherein, the optical wave-guide
device is related to a structure in plate shape.
3. An improved structure of a light wave-guide device as
claimed in Claim 1, wherein, at least one surface of
the optical wave-guide device is embossed.
- 30 4. An improved structure of a light wave-guide device as

claimed in Claim 1, wherein, the surface of the optical wave-guide device facing the lower diffuser sheet or the surface of the recess of the optical wave-guide device or the surface of the optical wave-guide device facing away from the lower diffuser is locally or entirely embossed.

5. An improved structure of a light wave-guide device as claimed in Claim 1, wherein, the embossment is made at least one straight line or curve or the combination of both in a form of V-, U-, or C-shaped cut.

10. An improved structure of a light wave-guide device as claimed in Claim 1, wherein, at least one surface of the optical wave-guide device is locally or entirely treated with ink, matted, or printed, or distributed with concave and convex points in either round, 15 rectangular, diamond or polygonal form.

15. An improved structure of a light wave-guide device as claimed in Claim 1, wherein, the optical wave-guide device is in the structure of a transparent sheet.

20. An improved structure of a light wave-guide device as claimed in Claim 1, wherein, the optical wave-guide device is in the structure of a white sheet.

25. An improved structure of a light wave-guide device as claimed in Claim 1, wherein, the optical wave-guide device is in the structure of a mat sheet.

30. An improved structure of a light wave-guide device as claimed in Claim 1, wherein, the optical wave-guide device is made of Polycarbonate (PC), or Polymethyl methacrylate (PMMA), or Polyethylene Terephthalate (PET) in to a transparent stick structure.

11. An improved structure of a light wave-guide device as claimed in Claim 1, wherein, the optical wave-guide device is made of Polycarbonate (PC), or Polymethyl methacrylate (PMMA), or Polyethylene Terephthalate (PET) in to a white stick structure.

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12. An improved structure of a light wave-guide device as claimed in Claim 1, wherein, the optical wave-guide device is made of transparent plastic materials including Polycarbonate (PC), or Polymethyl methacrylate (PMMA) added with diffusion agent into a matted stick structure.

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